

**PHYSICAL EXAMINATION MATRIX  
APPENDIX C**

**1. Specific Potentially Hazardous Exposures**

	<b>Exam</b>	<b>Regulation</b>
<b>A.</b>	<b>Arsenic</b>	<b>29 CFR Part 1910.1018</b>
<b>B.</b>	<b>Asbestos</b>	<b>29 CFR Part 1910.1001 29 CFR Part 1926.1101</b>
<b>C.</b>	<b>Benzene</b>	<b>29 CFR Part 1910.1028</b>
<b>D.</b>	<b>Beryllium</b>	<b>10 CFR Part 850 (DOE) NIOSH</b>
<b>E.</b>	<b>Cadmium</b>	<b>29 CFR Part 1910.1027 29 CFR Part 1926.1127</b>
<b>F.</b>	<b>Chromium</b>	<b>29 CFR Part 1910.1026 29 CFR Part 1926.1126</b>
<b>G.</b>	<b>Ethylene Oxide</b>	<b>29 CFR Part 1910.1047</b>
<b>H.</b>	<b>Formaldehyde</b>	<b>29 CFR Part 1910.1048</b>
<b>I.</b>	<b>Hydrazines</b>	<b>NIOSH</b>
<b>J.</b>	<b>Isocyanates</b>	<b>NIOSH</b>
<b>K.</b>	<b>Lead</b>	<b>29 CFR 1910.1025 29 CFR 1926.62</b>
<b>L.</b>	<b>Mercury</b>	<b>OSHA CPL 02-02-006 NIOSH, ATSDR</b>
<b>M.</b>	<b>Methylene Chloride</b>	<b>29 CFR Part 1910.1052 ATSDR</b>
<b>N.</b>	<b>4,4' Methylenebis (2-chloroaniline) (MOCA, MBOCA)</b>	<b>NIOSH, ATSDR, OSHA</b>
<b>O.</b>	<b>4,4' Methylenedianiline (MDA)</b>	<b>29 CFR 1910.19, 1910.1050 and 1926.60</b>
<b>P.</b>	<b>Nitrogen Tetroxide (Dioxide)</b>	<b>NIOSH</b>
<b>Q</b>	<b>Polychlorinated Biphenyls (PCB)</b>	<b>ATSDR NIOSH Current Intelligence Bulletin 45, February 24, 1986</b>
<b>R.</b>	<b>Silica Dust</b>	<b>29 CFR 1910.1000, 29 CFR 1915, OSHA CPL 2-2.7, NIOSH</b>
<b>S.</b>	<b>Trichloroethylene</b>	<b>NIOSH</b>

## 2. Hazardous Environments/ Workplace Examinations

	Exam	Regulation
A.	Bloodborne Pathogens	20 CFR 1910.1030
B.	Chemistry Laboratory	29 CFR 1910.1450
C.	Hazardous Waste Operations and Emergency Response	29 CFR 1910.120, NIOSH, EPA, USCG
D.	Health Care Provider	29 CFR 1910.1030, CDC
E.	Ionizing Radiation	10 CFR 20.1502
F.	Lasers	ANSI Z 136.1
G.	Noise	29 CFR 1910.95 NPR 1800.1B Chapter 4.9
H.	Pesticides	NIOSH, OSHA, EPA, USCG
I.	Spray Painting	
J.	Water and Sewage	
K.	Welding	NIOSH Criteria Document No. 88-110

## 3. Certification Examinations

	Exam	Regulation
A.	Childcare Workers	DHHS, CDC
B.	Confined Space/Tank Entry	29 CFR 1910.134 NIOSH
C. <i>NEW!</i>	Crane Operator/Ground Floor/Remote-Operation/High/Cabin/Pulpit	NASA-STD-8719.9 ASME B30.2-2001
D.	Diver	29 CFR 1910.423 29 CFR 1910.424
E.	DOT/Commercial Driver License/Motor Vehicle Certification/Multiple Passenger Van	49CFR 391.41-49 49 CFR 240.12
F.	Down Range/Shipboard Duty	46 CFR Subpart 10 and 12
G.	Firefighter	NFPA 1582
H.	Food Handler	46 CFR 12.25-20 NPR 1800.1C Chapter 4.12

I.	Locomotive Engineer	49 CFR 240.121
J.	Motive (Heavy) Equipment Operator	NASA-STD-8719.9 ANSI/ITSDF B56.1-2009
K.	Occupational Respirator Use	29 CFR 1910.134 29 CFR 1910.134 Appendix A
L.	Ordnance Handler	
M.	Primary Animal Contact	NIH, NIOSH
N.	Security	
O.	Self Contained Atmospheric Protective Ensemble	29 CFR 1910.134
P.	Soldering	
Q.	Voluntary Respirator Use	29 CFR 1910.134 29 CFR 1910.134 Appendix A

#### 4. Flight Activities

	Exam	Regulation
A.	First Class Airman's Medical Certificate	14 CFR 67 NPR 7900.3
B.	Second Class Airman's Medical Certificate	14 CFR 67 NPR 7900.3
C.	Third Class Airman's Medical Certificate	14 CFR 67 NPR 7900.3
D.	Air Traffic Control Specialist or Flight Crew	OPM Air Traffic Control Series, 2152 NPR 7900.3
E.	Qualified Non-Crew Member	NPR 7900.3

#### 5. Special Purpose Administrative Examinations

	Exam	Regulation
A.	Fitness for Duty	NPR 1800.1C
B.	Return to Work	NPR 1800.1C
C.	International Travel	NPR 1800.1C, Chapter 2.16

#### 6. Voluntary Health Maintenance

	Exam	Regulation
A.	Complete Health Maintenance Examination	FEBHP NPR 1800.1C, Chapter 2.9
B.	Annual Health Maintenance Examination	FEBHP NPR 1800.1C, Chapter 2.9
C.	Fitness Center Clearance	NPR 1800.1C, Chapter 2.9

## **EXAMINATION PROTOCOLS**

### **1. Surveillance Examinations for Workers with Specific Potentially Hazardous Exposures**

<b>A. Arsenic</b>	
Reference	OSHA 29 CFR Part 1910.1018
Frequency	<ol style="list-style-type: none"> <li>1. Baseline Examination</li> <li>2. Annual Examination, if less than 45 years old</li> <li>3. Semiannually, if 45 years old or older, or with 10 or more years of exposure</li> <li>4. Variable or Exposure-Determined Examination</li> <li>5. Exit/Reassignment Examination</li> </ol>
Laboratory	<ol style="list-style-type: none"> <li>1. Chest X-Ray (PA) Annually</li> <li>2. Discretionary Tests: <ol style="list-style-type: none"> <li>a. Pulmonary Function</li> <li>b. Complete Blood Count (CBC)</li> </ol> </li> </ol>
Physical Exam	<ol style="list-style-type: none"> <li>1. Medical and Occupational History</li> <li>2. Physical Examination with focus on peripheral and CNS, GI system, skin including nasal mucosa, respiratory tract and thyroid</li> <li>3. Evaluation of ability to wear respirator may be required, see protocol Section 3 K, Certification Examination for Occupational Respirator Use</li> </ol>
Target Organs	Liver, kidneys, skin, lungs, lymphatic system, CNS, PNS
Written Opinion	Standard Written Medical Opinion
Medical Removal	No requirement in standard

<b>B. Asbestos</b>	
Reference	OSHA 29 CFR Part 1910.1001 OSHA 29 CFR Part 1926.1101
Frequency	<ol style="list-style-type: none"> <li>1. Baseline Examination</li> <li>2. Annual Examination</li> <li>3. Exit/Reassignment Examination</li> </ol>
Laboratory (TX)	<ol style="list-style-type: none"> <li>1. Chest x-ray (PA) (Must be read by "B reader"): <ol style="list-style-type: none"> <li>a. Baseline</li> <li>b. Periodic: <ol style="list-style-type: none"> <li>i. 1-10 years since first exposure: <ol style="list-style-type: none"> <li>1. every 5 years</li> </ol> </li> <li>ii. 10+ years since first exposure, and: <ol style="list-style-type: none"> <li>1. Below age 35, every 5 years</li> </ol> </li> </ol> </li> </ol> </li> </ol>

	<ul style="list-style-type: none"> <li>2. Age 35-45, every 2 years</li> <li>3. Age 45+, annually</li> </ul> <ul style="list-style-type: none"> <li>2. Pulmonary Function</li> <li>3. Discretionary Tests: <ul style="list-style-type: none"> <li>a. Hemocult</li> <li>b. PPD</li> <li>c. Urinalysis (Dipstick)</li> </ul> </li> </ul>
Physical Exam	<ul style="list-style-type: none"> <li>1. Required Asbestos Questionnaire (Initial Medical Questionnaire or Periodic Medical Questionnaire)</li> <li>2. Physical Examination with focus on respiratory, CV and GI systems</li> <li>3. Evaluation of ability to wear respirator may be required, see protocol Section 3 K, Certification Examination for Occupational Respirator Use</li> </ul>
Target Organs	Respiratory/lungs, pleural (Mesothelioma), gastrointestinal
Written Opinion	Standard Written Medical Opinion for Asbestos within 30 days including statement that employee was informed of the increased risk of lung cancer attributable to combined effect of smoking and asbestos
Medical Removal	No requirement in standard

<b>C. Benzene</b>	
Reference	OSHA 29 CFR Part 1910.1028
Frequency	<ul style="list-style-type: none"> <li>1. Baseline Examination</li> <li>2. Annual Examination</li> <li>3. Variable or Exposure-Determined Examination</li> </ul>
Laboratory	<ul style="list-style-type: none"> <li>1. Complete Blood Count (CBC) including a leukocyte count with differential, a quantitative thrombocyte count, hematocrit, hemoglobin, erythrocyte count, and erythrocyte indices (MCV, MCH, MCHC) (Repeat within 2 weeks if abnormal, refer to standard for action level)</li> <li>2. Pulmonary Function (if employee wears respirator, initial exam and then every 3 years)</li> <li>3. For Emergency Exposures Only: <ul style="list-style-type: none"> <li>a. Urine sample provided at the end of employee's shift for urinary phenol test within 72 hours and urine specific gravity corrected to 1.024</li> <li>b. If urinary phenol test is equal to or greater than 75 mg phenol/L of urine, repeat Complete Blood Count (CBC) monthly for 3 months</li> </ul> </li> <li>4. Discretionary Tests: <ul style="list-style-type: none"> <li>a. Refer to Appendix C of Standard for Guidance</li> </ul> </li> </ul>
Physical Exam	<ul style="list-style-type: none"> <li>1. Detailed Medical and Occupational History initially, brief update annually</li> <li>2. Complete Physical Examination with focus on the blood, skin, CNS, and liver and kidney function</li> <li>3. Evaluation of ability to wear respirator may be required, see protocol Section 3 K, Certification Examination for Occupational Respirator Use</li> </ul>

Target Organs	Eyes, respiratory, CNS, skin, blood/bone marrow
Written Opinion	Standard Written Medical Opinion within 15 days
Medical Removal	Required when referred to hematologist/internist

<b>D. Beryllium</b>	
Reference	National Institute for Occupational Safety and Health (NIOSH), 10 CFR Part 850 (Department of Energy (DOE) rule)
Frequency	<ol style="list-style-type: none"> <li>1. Baseline Examination</li> <li>2. Annual Examination for Beryllium Workers</li> <li>3. Every 3 years for Beryllium Associated Workers</li> <li>4. Variable or Exposure-Determined Examination</li> </ol>
Laboratory	<ol style="list-style-type: none"> <li>1. Chest X-Ray (PA) (Must be read by "B reader"): <ol style="list-style-type: none"> <li>a. Baseline</li> <li>b. Every 5 Years</li> </ol> </li> <li>2. Pulmonary Function</li> <li>3. Be-LPT (for significant exposure)</li> </ol>
Physical Exam	<ol style="list-style-type: none"> <li>1. Medical and Occupational History</li> <li>2. Physical Examination with focus on skin, eyes, and respiratory tract</li> <li>3. Evaluation of ability to wear respirator may be required, see protocol Section 3 K, Certification Examination for Occupational Respirator Use</li> </ol>
Target Organs	Respiratory, kidney, CNS, liver, skin, eyes
Written Opinion	Standard Written Medical Opinion within 14 days of receipt of results
Medical Removal	Required based upon medical recommendation
Multiple Physician Review Process	Required if requested by examinee (see CFR)

<b>E. Cadmium</b>	
Reference	OSHA 29 CFR Part 1910.1027 OSHA 29 CFR Part 1926.1127
Frequency	<ol style="list-style-type: none"> <li>1. Baseline Examination</li> <li>2. Annual Examination 1 year following Baseline Examination</li> <li>3. Biennially Examination (see standard for guidance on frequency with abnormal laboratory findings)</li> <li>4. Variable or Exposure-Determined Examination</li> <li>5. Exit/Reassignment Examination</li> </ol>
Laboratory	Annual Laboratory: <ol style="list-style-type: none"> <li>1. Cadmium in Urine (CdU) (See Appendix F for protocol for sample handling and laboratory selection)</li> <li>2. Beta-2 Microglobulin in Urine (B(2)-M)</li> <li>3. Cadmium in Blood (CdB)</li> <li>4. BUN and Serum Creatinine</li> <li>5. Complete Blood Count (CBC)</li> <li>6. Chest X-ray (PA): <ol style="list-style-type: none"> <li>a. Baseline</li> <li>b. Exit/Reassignment</li> </ol> </li> <li>7. Pulmonary Function</li> </ol>

	8. Discretionary Tests: <ol style="list-style-type: none"> <li>Annual Chest X-Ray</li> <li>PSA (for males 50 years and older)</li> <li>Urinalysis</li> </ol>
Physical Exam	1. Cadmium Exposure Questionnaire required (Appendix D in CFR) 2. Complete Physical Examination with focus on blood pressure, respiratory and urinary systems (refer to health effects Appendix A) 3. Prostate Palpation, males 40 years and older 4. Evaluation of ability to wear respirator may be required, see protocol Section 3 K, Certification Examination for Occupational Respirator Use
Written Opinion	Standard Written Medical Opinion for Cadmium
Medical Removal	Required
Multiple Physician Review Process	Required if requested by examinee (see CFR)

<b>F. Chromium</b>	
Reference	OSHA 29 CFR 1910.1026, 29 CFR Part 1926.1126
Frequency	1. Baseline Examination 2. Annual Examination 3. Variable or Exposure-Determined Examination 4. Exit/Reassignment Examination
Laboratory	Discretionary
Physical Exam	1. Medical and Occupational History 2. Physical Exam with focus on skin and respiratory tract
Target Organs	Respiratory, liver, kidney, eye, skin
Written Opinion	Standard Written Medical Opinion within 30 days
Medical Removal	No requirement in standard

<b>G. Ethylene Oxide</b>	
Reference	OSHA 29 CFR Part 1910.1047
Frequency	1. Baseline Examination 2. Annual Examination 3. Variable or Exposure-Determined Examination 4. Exit/Reassignment Examination
Laboratory	1. Complete Blood Count (CBC) with Differential 2. Discretionary Tests: <ol style="list-style-type: none"> <li>Pregnancy Test</li> <li>Laboratory Evaluation of Fertility, if requested by examinee and considered appropriate by provider</li> <li>Blood Chemistry Panel</li> <li>Urinalysis</li> </ol>
Physical Exam	1. Medical and Occupational History 2. Physical Examination with focus on pulmonary, hematologic, neurologic, and reproductive system, and eyes and skin. 3. Evaluation of ability to wear respirator may be required, see protocol Section 3 K, Certification Examination for Occupational Respirator Use

Target Organs	Respiratory, blood, CNS, reproductive, eye, skin, liver, kidney
Written Opinion	Standard Written Medical Opinion within 15 days
Medical Removal	No requirement in standard

<b>H. Formaldehyde</b>	
Reference	OSHA 29 CFR Part 1910.1048
Frequency	<ol style="list-style-type: none"> <li>1. Baseline Examination</li> <li>2. Annual Examination (for employees required to wear respirator, others discretionary)</li> <li>3. Variable or Exposure-Determined Examination</li> <li>4. Exit/Reassignment Examination</li> </ol>
Laboratory	<ol style="list-style-type: none"> <li>1. Pulmonary Function (for required respirator use): <ol style="list-style-type: none"> <li>a. Baseline</li> <li>b. Annual</li> </ol> </li> </ol>
Physical Exam	<ol style="list-style-type: none"> <li>1. Medical and Occupational History (Non-mandatory Medical Disease Questionnaire - Appendix D in CFR recommended)</li> <li>2. Physical Examination with focus on eyes, skin, mucous membranes, and allergies and allergic reactions</li> <li>3. Evaluation of ability to wear respirator may be required, see protocol Section 3 K, Certification Examination for Occupational Respirator Use</li> </ol>
Target Organs	Respiratory, eyes, skin
Written Opinion	Standard Written Medical Opinion for Formaldehyde within 15 days of results
Medical Removal	Required
Multiple Physician Review Process	Required if requested by examinee (see CFR)

<b>I. Hydrazines</b>	
Reference	NIOSH
Frequency	<ol style="list-style-type: none"> <li>1. Baseline Examination</li> <li>2. Annual Examination</li> </ol>
Laboratory	<ol style="list-style-type: none"> <li>1. Chest X-Ray (Baseline only)</li> <li>2. Complete Blood Count (CBC)</li> <li>3. Liver Profile</li> <li>4. Urinalysis with Microscopic</li> <li>5. Discretionary: <ol style="list-style-type: none"> <li>a. Pulmonary Function</li> </ol> </li> </ol>
Physical Exam	<ol style="list-style-type: none"> <li>1. Medical and Occupational History</li> <li>2. Physical Examination</li> <li>3. Evaluation of ability to wear respirator may be required, see protocol Section 3 K, Certification Examination for Occupational Respirator Use</li> </ol>
Target Organs	Eyes, respiratory, skin, CNS, liver, kidneys
Written Opinion	No requirement in standard
Medical Removal	No requirement in standard

<b>J. Isocyanates</b> (e.g., Methylene Diisocyanate (MDI), Toluene Diisocyanate (TDI))	
Reference	NIOSH 78-215



Frequency	1. Baseline Examination 2. Variable or Exposure Determined Examination 3. Annual Examination
Laboratory	1. Pulmonary Function 2. Chest X-Ray (PA) at 5-year intervals
Physical Exam	1. Medical and Occupational History 2. Physical Examination with focus on respiratory system, skin, and mucous membranes (Isocyanates are potent sensitizers. Acute exposures may cause severe airway obstruction) 3. Evaluation of ability to wear respirator may be required, see protocol Section 3 K, Certification Examination for Occupational Respirator Use
Target Organs	Eyes, respiratory, kidney, liver, skin, CNS
Written Opinion	No requirement in standard
Medical Removal	No requirement in standard

<b>K. Lead</b>	
Reference	OSHA 29 CFR 1910.1025 OSHA 29 CFR 1926.62
Frequency	1. Baseline Examination 2. Annual Examination for employee's with Blood Lead over 40ug/100g in the preceding 12 months 3. Variable or Exposure-Determined Examination 4. Exit/Reassignment Examination
Laboratory	1. Blood Lead and ZPP (Baseline and every 6 months) 2. If Blood Lead at or above 40ug/100g repeat every 2 months 3. Repeat Blood Lead 2 weeks after any test result at or above 60ug/100g (requires medical removal) 4. During Medical Removal, Blood Lead and ZPP monthly 5. Hemoglobin (Hgb) and Hematocrit (Hct), red cell indices, and examination of peripheral smear morphology 6. BUN and Serum Creatinine 7. Urinalysis with Microscopic 8. Discretionary Tests: a. Pregnancy/Fertility Testing, if employee requests
Physical Exam	1. Medical and Occupational History 2. Complete Physical Examination with focus on teeth, gums, hematological, GI, CV, renal, and neurological system 3. Blood Pressure 4. Evaluation of ability to wear respirator may be required, see protocol Section 3 K, Certification Examination for Occupational Respirator Use
Target Organs	Pulmonary, kidney, blood, reproductive, CNS, gastrointestinal, CV, gums, teeth, eyes
Written Opinion	Standard Written Medical Opinion for all evaluations and employee written notification of blood level results over 40ug/100g within 5 business days
Medical Removal	Required (see CFR for criteria)
Multiple Physician Review Process	Required if requested by examinee (see CFR)

<b>L. Mercury</b>	
Reference	OSHA CPL 02-02-006, NIOSH, Agency for Toxic Substances and Disease Registry (ATSDR) 1992
Frequency	<ol style="list-style-type: none"> <li>1. Baseline Examination</li> <li>2. Annual Interim History</li> <li>3. Variable or Exposure-Determined Examination</li> </ol>
Laboratory	<ol style="list-style-type: none"> <li>1. Complete Blood Count (CBC)</li> <li>2. Urinalysis</li> <li>3. Voluntary Pregnancy Test where appropriate</li> <li>4. Urine Mercury Level (for history of exposure, recommended all employees in given work area all be tested at the same time) If exposed above PEL test every 3 months, if below PEL test every 6 months.</li> </ol>
Physical Exam	<ol style="list-style-type: none"> <li>1. Medical and Occupational History (Annual Interim History)</li> <li>2. Physical Examination with focus on central nervous and respiratory systems, kidneys and skin</li> <li>3. Evaluation of ability to wear respirator may be required, see protocol Section 3 K, Certification Examination for Occupational Respirator Use</li> </ol>
Target Organs	Liver, kidney, CNS, PNS, lung, eye, mucous membranes
Written Opinion	<p>Standard Written Medical Opinion including:</p> <ol style="list-style-type: none"> <li>a) The signs or symptoms of mercury exposure manifested by the employee, if any</li> <li>b) A laboratory report of the mercury content in blood or urine if such analysis is performed by or under the supervision of the physician, or reported to the physician by a laboratory to which such samples have been submitted for analysis</li> <li>c) The physician's opinion as to whether the employee has any detected risk of material impairment to the employee's health from exposure to mercury or its inorganic compounds or would directly or indirectly aggravate any detected medical condition</li> <li>d) Any recommended limitation upon the employee's exposure to mercury or its inorganic compounds or upon the use of PPE and respirators</li> <li>e) A statement that the employee has been informed by the physician of any medical condition which requires further examination or treatment</li> </ol>
Medical Removal	No requirement in standard

<b>M. Methylene Chloride</b>	
Reference	OSHA 29 CFR Part 1910.1052, ATSDR
Frequency	<ol style="list-style-type: none"> <li>1. Baseline Examination</li> <li>2. Annual Medical and Occupational History Update</li> <li>3. Examination Frequency Age Determined: <ol style="list-style-type: none"> <li>a. Annual, if age 45 or older</li> <li>b. Every 36 months under age 45</li> </ol> </li> <li>4. Variable or Exposure-Determined Examination</li> </ol>

	5. Exit/Reassignment Examination
Laboratory	1. Discretionary: <ul style="list-style-type: none"> <li>a. Pulmonary Function</li> <li>b. Hemoglobin (Hgb) and Hematocrit (Hct)</li> <li>c. ALT, SGPT</li> <li>d. Post-shift Carboxyhemoglobin</li> <li>e. ECG</li> </ul>
Physical Exam	1. Methylene Chloride Questionnaire required (Annual Interim History) 2. Physical Examination focus on employee health status and analysis of Questionnaire responses 3. Evaluation of ability to wear respirator may be required, see protocol Section 3 K, Certification Examination for Occupational Respirator Use
Target Organs	Respiratory, CV, liver, CNS, skin, blood
Written Opinion	Standard Written Medical Opinion for Methylene Chloride (MC) with the following within 15 days of completion of medical and laboratory findings but not more than 30 days past examination including: <ul style="list-style-type: none"> <li>a. Statement that the physician has informed the employee MC is a potential carcinogen risk</li> <li>b. The risk factors for heart disease, and the potential exacerbation of underlying heart disease from MC exposure and its metabolism to carbon monoxide</li> </ul>
Medical Removal	Required
Multiple Physician Review Process	Required if requested by examinee (see CFR)

<b>N. 4,4' Methylenebis (2-chloroaniline) (MOCA, MBOCA)</b>	
Reference	NIOSH Publication No. 78-188; ATSDR Toxicological Profile on 4,4'-Methylene Bis (2-Chloroaniline), OSHA
Frequency	1. Baseline Examination 2. Annual Examination 3. Laboratory only every 6 months (employees working directly in production or handling for 10 years or longer)
Laboratory	1. Complete Blood Count (CBC) 2. Blood Chemistry Profile 3. Urinalysis with Microscopic 4. Chest X-ray
Physical Exam	1. Medical and Occupational History 2. Focused Physical Examination
Target Organs	Liver, blood, kidneys
Written Opinion	No requirement in standard
Medical Removal	No requirement in standard

<b>O. 4,4' Methylenedianiline (MDA)</b>	
Reference	OSHA 29 CFR 1910.1050
Frequency	1. Baseline Examination 2. Annual Examination

Laboratory	1. Blood Chemistry Profile 2. Urinalysis with Microscopic
Physical Exam	1. Medical and Occupational History 2. Physical Examination with focus on skin disease and liver dysfunction 3. Evaluation of ability to wear respirator may be required, see protocol Section 3 K, Certification Examination for Occupational Respirator Use
Target Organs	Skin, eyes, liver, CV, spleen
Written Opinion	Standard Written Medical Opinion required
Medical Removal	Required
Multiple Physician Review Process	Required if requested by examinee (see CFR)

#### **P. Nitrogen Tetroxide (Dioxide)**

Reference	NIOSH
Frequency	Baseline Examination
Laboratory	Discretionary
Physical Exam	1. Medical and Occupational History 2. Physical Examination with focus on pulmonary system, skin, and eyes
Target Organs	Eyes, respiratory, CV
Written Opinion	No requirement in standard
Medical Removal	No requirement in standard

#### **Q. Polychlorinated Biphenyls (PCB)**

Reference	ATSDR, NIOSH Current Intelligence Bulletin 45, February 24, 1986
Frequency	1. Baseline Examination 2. Annual Examination 3. Variable or Exposure-Determined Examination 4. Exit/Reassignment Examination
Laboratory	1. Blood Chemistry Profile 2. Complete Blood Count (CBC) 3. Urinalysis 4. Chest X-Ray (Baseline only) 5. Discretionary Tests: a. ECG b. Pulmonary Function c. Fecal Occult Blood
Physical Exam	1. Medical and Occupational History 2. Physical Examination with focus on the skin, liver and nervous system 3. Evaluation of ability to wear respirator may be required, see protocol Section 3 K, Certification Examination for Occupational Respirator Use
Target Organs	Skin, liver, CNS
Written Opinion	No requirement in standard
Medical Removal	No requirement in standard

#### **R. Silica Dusts**

Reference	NIOSH Publication No. 2002-129, OSHA 29 CFR 1910.1000, 29 CFR 1915, OSHA CPL 2-2.7 (1978, October 30)
Frequency	1. Baseline Examination 2. Annual Examination
Laboratory	1. Chest X-Ray (Must be read by "B reader"): a. Baseline b. Every 5 years for workers exposed less than 20 years c. Every 2 years for workers exposed over 20 years 2. Pulmonary Function 3. PPD
Physical Exam	1. Medical and Occupational History 2. Physical Examination with focus on respiratory system 3. Evaluation of ability to wear respirator may be required, see protocol Section 3 K, Certification Examination for Occupational Respirator Use
Target Organs	Lungs/respiratory, eyes
Written Opinion	Standard Written Medical Opinion including: a. Signs and symptoms of silica exposure manifested by the employee b. Report of chest x-ray and pulmonary function test c. Opinion on whether employee has detected medical condition that may place employee at increased risk of impairment to the employees health from exposure to silica or other substances or would directly or indirectly aggravate any detected medical condition d. Any recommended limitations upon employee's exposure to silica or other substances or upon use of PPE and respirators e. Statement employee has been informed by the physician of any medical condition which requires further examination or treatment
Medical Removal	No requirement in standard

<b>S. Trichloroethylene</b>	
Reference	NIOSH, ATSDR
Frequency	1. Baseline Examination 2. Annual Examination
Laboratory	Discretionary
Physical Exam	1. Medical and Occupational History 2. Physical Examination with focus on cardiac, pulmonary, liver and kidneys 3. Evaluation of ability to wear respirator may be required, see protocol Section 3 K, Certification Examination for Occupational Respirator Use
Target Organs	Respiratory, CV, kidney, liver, skin, CNS, eyes
Written Opinion	No requirement in standard
Medical Removal	No requirement in standard

## **2. Hazardous Environments/Workplace Examinations**

<b>A. Bloodborne Pathogens</b>	
Reference	OSHA 20 CFR 1910.1030

Frequency	<ol style="list-style-type: none"> <li>1. Baseline Examination (for occupational groups covered under the standard)</li> <li>2. Variable and Exposure-Determined Examination</li> </ol>
Laboratory	<ol style="list-style-type: none"> <li>1. Hepatitis B Vaccine</li> <li>2. Hepatitis B Surface Antibody (HepBSAb) Titer (required one time only after 3<sup>rd</sup> dose completed)</li> <li>3. Declination statement must be signed if Hepatitis B Vaccine declined by employee (Appendix A of OSHA Standard)</li> <li>4. Discretionary (Post-exposure): <ol style="list-style-type: none"> <li>a. Victim: HIV test, HepBSAb if not already documented, and HepCAb (other tests per provider)</li> <li>b. Source (after consent given): HIV test (rapid screen if available), HepB Surface Antigen (HepBSAg), and HepCAb (other tests per provider)</li> <li>c. If any HIV test is performed because of a specific occupational exposure, a confidential ID system and a secure method to receive the test results shall be insured for both victim and source</li> </ol> </li> </ol>
Physical Exam	<ol style="list-style-type: none"> <li>1. Medical and Occupational History</li> <li>2. Focused Physical Examination (Discretionary)</li> </ol>
Target Organs	Multiple organs
Written Opinion	Standard Written Medical Opinion required within 15 days of completion of evaluation including whether Hepatitis B vaccination is indicated and if the employee has received such vaccine
Medical Removal	No requirement in standard

<b>B. Chemical Laboratory</b>	
Reference	OSHA 29 CFR 1910.1450
Frequency	Variable or Exposure-Determined Examination
Laboratory	<ol style="list-style-type: none"> <li>1. Discretionary: <ol style="list-style-type: none"> <li>a. Blood Chemistry Profile</li> <li>b. Complete Blood Count (CBC)</li> <li>c. Chest X-Ray</li> <li>d. Pulmonary Function</li> <li>e. Urinalysis</li> <li>f. Visual Acuity</li> </ol> </li> </ol>
Physical Exam	<ol style="list-style-type: none"> <li>1. Medical and Occupational History</li> <li>2. Focused Physical Examination</li> <li>3. Evaluation of ability to wear respirator may be required, see protocol Section 3 K, Certification Examination for Occupational Respirator Use</li> </ol>
Target Organs	Multiple organs, especially eyes, skin, liver
Written Opinion	Standard Written Opinion required
Medical Removal	No requirement in standard

<b>C. Hazardous Waste Operations and Emergency Response</b>	
Reference	OSHA 29 CFR 1910.120, Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities, NIOSH, OSHA, U.S. Coast Guard (USCG), and Environmental Protection

	Agency (EPA) October 1985
Frequency	<ol style="list-style-type: none"> <li>1. Baseline Examination</li> <li>2. Annual Examination</li> <li>3. Variable or Exposure-Determined Examination</li> <li>4. Exit/Reassignment Examination</li> </ol>
Laboratory	<ol style="list-style-type: none"> <li>1. Audiogram (Baseline only)</li> <li>2. Visual Acuity, Color Discrimination, Visual Fields</li> <li>3. Complete Blood Count (CBC)</li> <li>4. Blood Chemistry Profile</li> <li>5. Urinalysis</li> <li>6. Chest X-Ray</li> <li>7. Discretionary Tests: <ol style="list-style-type: none"> <li>a. ECG</li> <li>b. Exercise Stress Test</li> <li>c. Pulmonary Function</li> <li>d. Other based on specific exposure (see Guidance Manual)</li> </ol> </li> </ol>
Physical Exam	<ol style="list-style-type: none"> <li>1. Medical and Occupational History</li> <li>2. Physical Examination with focus on worker's fitness including ability to wear any required PPE, back or musculoskeletal problems, heat stress, claustrophobia</li> <li>3. Evaluation of ability to wear respirator may be required, see protocol Section 3 K, Certification Examination for Occupational Respirator Use</li> <li>4. Employee may also be covered by Bloodborne Pathogen Standard</li> </ol>
Target Organs	Multiple organs
Written Opinion	<p>Standard Written Medical Opinion required including:</p> <ol style="list-style-type: none"> <li>a. Statement that the employee has sufficient strength, endurance, and emotional stability to perform the work</li> <li>b. Opinion that no medical condition was detected which would place the employee at increased risk of material impairment of the employee's health or would be a hazard to self or others from hazardous waste operations, emergency response, or respirator use</li> <li>c. Any limitations in job functions or ability to wear PPE</li> <li>d. The results of the medical examination and tests were also provided if requested by the employee</li> </ol>
Medical Removal	No requirement in standard
Note regarding eligibility	<p>Protocol covers the following employees:</p> <ol style="list-style-type: none"> <li>a. Potentially exposed to hazardous substances, without regard to the use of respirator, for more than 30 days per year</li> <li>b. Required to use a respirator more than 30 days per year</li> <li>c. Injured from exposure of hazardous substances during an emergency incident</li> <li>d. Members of a HazMat Team</li> </ol> <p>Employees Not Covered in Standard:</p> <ol style="list-style-type: none"> <li>a. Emergency Responders not designated members of HazMat Team (e.g., Security, Firefighters)</li> </ol>

<b>D. Healthcare Provider</b>	
Reference	OSHA 20 CFR 1910.1030, Centers for Disease Control and Prevention (CDC)
Frequency	1. Baseline Examination 2. Variable or Exposure-Determined Examination
Laboratory	1. Hepatitis B Vaccine (required or declination letter shall be completed) or demonstrated immunity 2. PPD required for Baseline (Periodic Testing Discretionary based on Risk Assessment for the Facility) 3. Discretionary: a. Hepatitis Profile b. Measles, Mumps, Rubella (MMR) Vaccine c. Diphtheria, Tetanus, and Pertussis (Td, Tdap) Vaccine d. Varicella Vaccine (if no history of chicken pox) e. Influenza Vaccine offered annually
Physical Exam	1. Medical and Occupational History 2. Focused Physical Examination (Discretionary) 3. Employee also covered by Bloodborne Pathogen Standard
Target Organs	Respiratory, blood, liver, skin

<b>E. Ionizing Radiation</b>	
Reference	10 CFR 20.1502
Frequency	Variable or Exposure-Determined Examination
Laboratory	Complete Blood Count (CBC) with Differential
Physical Exam	1. Medical and Occupational History including exposure 2. Focused Physical Examination
Target Organs	Exposure determined

<b>F. Lasers</b>	
Reference	ANSI Z 136.1 (2007), Required for Class 3B and Class 4 Lasers
Frequency	1. Baseline Examination (required) 2. Variable or Exposure-Determined Examination (within 48 hours)
Laboratory	1. Visual Acuity with refraction corrections to 20/20 (6/6) far and near vision (more extensive examination indicated if this is not met – see standard) 2. Amsler Grid (or similar pattern to test macular function for vision distortions and scotomas) 3. Color Vision Discrimination (Ishihara or similar color vision test) 4. Ocular Fundus Examination with Ophthalmoscope or appropriate Fundus Lens at a Slit Lamp if visual acuity, macular function, or color vision abnormal.
Physical Exam	1. Medical, Occupational, and Ocular History 2. Focused Physical Examination performed by or under supervision of ophthalmologist, optometrist or other qualified physician 3. Limited skin examination
Target Organs	Eye, skin
Written Opinion	No requirement in standard
Medical Removal	No requirement in standard



<b>G. Noise</b>	
Reference	OSHA 29 CFR 1910.95, NPR 1800.1C Chapter 4.8
Frequency	<ol style="list-style-type: none"> <li>1. Baseline Examination (within 30 days)</li> <li>2. Annual Examination</li> <li>3. Exit/Reassignment Examination</li> </ol>
Laboratory	<ol style="list-style-type: none"> <li>1. Audiogram</li> <li>2. Retest (Audiogram) within 30 days if a STS</li> </ol>
Physical Exam	<ol style="list-style-type: none"> <li>1. Medical and Occupational History</li> <li>2. Focused Physical Examination with focus on external and tympanic membrane</li> </ol>
Target Organs	Ears and hearing nerves
Written Opinion	Required within 21 days of Standard Threshold Shift (STS) determination including statement that STS has occurred, whether further evaluation and testing indicated, and opinion on work relatedness or aggravation by occupational noise exposure, and limitation in use of protective hearing equipment
Medical Removal	No requirement in standard

<b>H. Pesticides</b>	
Reference	NIOSH, OSHA, EPA, USCG
Frequency	<ol style="list-style-type: none"> <li>1. Baseline Examination</li> <li>2. Annual Examination</li> <li>3. Variable or Exposure-Determined Examination</li> <li>4. Exit/Reassignment Examination</li> </ol>
Laboratory	<ol style="list-style-type: none"> <li>1. Baseline (required before occupational exposure) Plasma and RBC Cholinesterase baselines should be established by performing each test twice (3 to 7 days between tests) and averaging the result for the Baseline for each</li> <li>2. Blood Chemistry Profile</li> <li>3. Urinalysis (Dipstick)</li> <li>4. Discretionary Tests: <ol style="list-style-type: none"> <li>a. Pulmonary Function</li> <li>b. RBC Cholinesterase levels for recent exposure</li> <li>c. Plasma Cholinesterase for acute exposure</li> </ol> </li> </ol>
Physical Exam	<ol style="list-style-type: none"> <li>1. Medical and Occupational History</li> <li>2. Physical Examination with focus on the skin and nervous system</li> <li>3. Evaluation of ability to wear respirator may be required, see protocol Section 3 K, Certification Examination for Occupational Respirator Use</li> </ol>
Target Organs	Kidney, liver, CNS, skin, lung
Medical Removal	If plasma or RBC Cholinesterase activity is decreased by 30% or greater from baseline the employee should be removed from exposure until follow-up test levels are at least 80% of baseline

<b>I. Spray Painting</b>	
Reference	
Frequency	<ol style="list-style-type: none"> <li>1. Baseline Examination</li> <li>2. Variable or Exposure-Determined Examination</li> </ol>

Laboratory	Discretionary Tests: <ol style="list-style-type: none"> <li>Blood Chemistry Profile</li> <li>Complete Blood Count (CBC)</li> <li>Chest X-Ray</li> <li>Urinalysis</li> <li>Pulmonary Function</li> </ol>
Physical Exam	<ol style="list-style-type: none"> <li>Medical and Occupational History</li> <li>Physical Examination (discretionary)</li> <li>Evaluation of ability to wear respirator may be required, see protocol Section 3 K, Certification Examination for Occupational Respirator Use</li> <li>Evaluation of other potential exposures, e.g., lead</li> </ol>

<b>J. Water and Sewage</b>	
Reference	
Frequency	<ol style="list-style-type: none"> <li>Baseline Examination</li> <li>Annual Examination</li> <li>Variable or Exposure-Determined Examination</li> </ol>
Laboratory	<ol style="list-style-type: none"> <li>Immunizations offered:               <ol style="list-style-type: none"> <li>Tetanus Diphtheria (Td) Vaccine</li> <li>Hepatitis A and B Vaccine</li> </ol> </li> <li>Discretionary Tests:               <ol style="list-style-type: none"> <li>Blood Chemistry Profile</li> <li>Complete Blood Count (CBC)</li> <li>Chest X-Ray</li> </ol> </li> </ol>
Physical Exam	<ol style="list-style-type: none"> <li>Medical and Occupational History</li> <li>Physical Examination (Discretionary)</li> </ol>
Target Organs	Liver, gastrointestinal, blood

<b>K. Welding</b>	
Reference	NIOSH Criteria Document No. 88-110
Frequency	<ol style="list-style-type: none"> <li>Baseline Examination</li> <li>Annual Examination</li> <li>Variable or Exposure-Determined Examination</li> </ol>
Laboratory	<ol style="list-style-type: none"> <li>Pulmonary Function (Baseline only)</li> <li>Blood Chemistry Profile</li> <li>Complete Blood Count (CBC)</li> <li>Urinalysis</li> <li>Visual Acuity, Depth Perception and Color Discrimination</li> <li>Chest X-Ray (Baseline)</li> <li>Discretionary               <ol style="list-style-type: none"> <li>Skin Cancer Screening</li> </ol> </li> </ol>
Physical Exam	<ol style="list-style-type: none"> <li>Medical and Occupational History</li> <li>Physical Examination with focus on skin, respiratory, macular, cornea, fundus, and any condition that may interfere with ability to perform duties</li> <li>Evaluation of ability to wear respirator may be required, see protocol Section 3 K, Certification Examination for Occupational Respirator Use</li> <li>Evaluation of other potential exposures, e.g. metals, flux,</li> </ol>

	compounds
Target Organs	Respiratory, eyes, varies with exposure type

### 3. Certification Examinations

<b>A. Childcare Workers</b>	
Reference	The ABC's of Safe and Healthy Childcare: A Handbook for Childcare Providers (Department of Health and Human Services (DHHS), Centers for Disease Control and Prevention (CDC))
Frequency	1. Baseline Examination 2. Variable or Exposure-Determined Examination
Laboratory	1. PPD every 2 years 2. Discretionary Immunization offered: a. Influenza Vaccine b. Measles, Mumps, and Rubella (MMR) Vaccine c. Tetanus/Diphtheria (Td) Vaccine d. Polio Vaccine e. Hepatitis A Vaccine f. Chickenpox Vaccine g. Hepatitis B Vaccine
Physical Exam	1. Medical and Occupational/Immunization History 2. Physical Exam with focus on ability to lift and bend repetitively
Written Opinion	Job Certification with any limitations

<b>B. Confined Space/Tank Entry</b>	
Reference	29 CFR 1910.134, NIOSH
Frequency	1. Baseline Examination 2. Annual Examination
Laboratory	1. Audiogram 2. Visual Acuity, Depth Perception and Color Vision (or demonstration of employee's ability to see and hear warnings, such as flashing lights, buzzers, and sirens) 3. Discretionary Tests: a. ECG b. Chest X-Ray (Baseline only) c. Urinalysis (Dipstick) d. Pulmonary Function
Physical Exam	1. Medical and Occupational History 2. Physical Examination with focus on employee's ability to carry out assigned duties and detection of any disease or abnormality that would make it difficult to work within confined spaces 3. Evaluation of ability to wear respirator may be required, see protocol Section 3 K, Certification Examination for Occupational Respirator Use 4. Evaluation of other exposures may be required
Written Opinion	Job Certification with any limitations

### **C. Crane Operators**

<b>Note: includes ground floor, remote operation, high, cabin, pulpit, rigger</b>	
Reference	National Commission for the Certification of Crane Operations (NCCCO)
Frequency <b>NEW!</b>	<ol style="list-style-type: none"> <li>1. Baseline Examination</li> <li>2. Every 3 years</li> </ol>
Laboratory	<ol style="list-style-type: none"> <li>1. Audiogram: No hearing loss in better ear greater than an average of 40 dB at 500, 1,000, 2,000, 3,000 and 4,000 Hz with or without a hearing aid</li> <li>2. Visual Acuity: Minimum of at least 20/30 Snellen in one eye and 20/50 Snellen in the other eye with or without corrective lenses</li> <li>3. Depth Perception</li> <li>4. Field of Vision at least 70 degrees in the horizontal median in each eye</li> <li>5. Color Vision</li> <li>6. Discretionary Tests: <ol style="list-style-type: none"> <li>a. ECG</li> <li>b. Urinalysis</li> <li>c. Pulmonary Function</li> <li>d. Hemoglobin (Hgb) and Hematocrit (Hct)</li> </ol> </li> </ol>
Physical Exam	<p>Complete examination:</p> <ol style="list-style-type: none"> <li>1. History to ascertain any condition that may cause any sudden incapacitation or inability to perform duties</li> <li>2. Evaluation for reaction time, manual dexterity, coordination</li> <li>3. No tendencies to seizures, dizziness, claustrophobia, sudden incapacitation, loss of physical control, or similar undesirable conditions such as insulin controlled diabetes</li> <li>4. No evidence of physical defects, or emotional instability, that in the opinion of the examiner, would present a hazard to self or others</li> </ol>
Written Opinion	Job Certification with any limitations or referral for further testing

<b>D. Diver</b>	
Reference	29 CFR 1910.401-441, Subpart T; U.S. Navy, Manual of the Medical Department, Article 15-66.
Frequency	<ol style="list-style-type: none"> <li>1. Baseline Examination</li> <li>2. Annual Examination</li> </ol>
Laboratory	<ol style="list-style-type: none"> <li>1. Audiogram</li> <li>2. ECG</li> <li>3. Chest X-Ray (PA and Lateral) (Baseline only)</li> <li>4. Pulmonary Function (Vital Capacity)</li> <li>5. Urinalysis (Dipstick)</li> <li>6. Blood Chemistry Profile</li> <li>7. Complete Blood Count (CBC)</li> <li>8. PPD</li> <li>9. Visual Acuity and Color Discrimination</li> <li>10. Discretionary Tests: <ol style="list-style-type: none"> <li>a. Exercise Stress Test</li> </ol> </li> </ol>
Physical Exam	<ol style="list-style-type: none"> <li>1. Medical and Occupational History to include predisposition to</li> </ol>

	unconsciousness, vomiting, cardiac arrest, impairment of oxygen transport, serious blood loss, or anything that interferes with effective underwater work 2. Physical Examination
Written Opinion	Job Certification with any limitations, or recommend further specialized clinical evaluation or testing

<b>E. DOT/Commercial Driver License/ Motor Vehicle Certification/Multiple Passenger Van</b>	
Reference	49 CFR 391.41-49, Department of Transportation (DOT)
Frequency	1. Baseline Examination 2. Biennial Examination unless more frequent examination required by the examining provider (per DOT regulations)
Laboratory	1. Audiogram: Hearing thresholds in better ear $\leq$ 40 dB at 500, 1,000, 2,000 Hz with or without hearing aid 2. Visual Acuity: At least 20/40 (Snellen) in each eye without corrective lenses or visual acuity separately corrected to 20/40 or better with corrective lenses, distant binocular acuity of at least 20/40 in both eyes with or without corrective lenses 3. Depth Perception 4. Gross Field of Vision: 70 degrees in each eye 5. Traffic Signal Color Perception 6. Urinalysis (Dipstick) 7. Discretionary Tests: a. Chest X-Ray b. Complete Blood Count (CBC) c. Blood Chemistry Profile d. ECG e. Exercise Stress Test f. Pulmonary Function
Physical Exam	1. Medical and Occupational History 2. Physical Examination with focus on any condition that may cause any sudden incapacitation or inability to perform duties, tendencies to seizures, dizziness, claustrophobia, loss of physical control, or similar undesirable conditions (Note: Cannot qualify if diabetic on insulin or if currently on medication for seizure disorder/epilepsy)
Written Opinion	Job Certification with any limitations or referral for additional specialized clinical evaluation or testing

<b>F. Down Range/Shipboard Duty</b>	
Reference	46 CFR Subpart 10.205; 12.02-27; 12.25
Frequency	1. Baseline Examination (temporary assignment to ships, submarines, or NASA Test Range shipboard) 2. Annual Examination (for Masters, Chief Mates, Chief Engineers, 1 <sup>st</sup> Assistant Engineer, Food Handlers, or anyone 60 years and up, or temporary assignments) 3. Variable (if none of the above): a. Every 5 years for 17 to 24 years of age b. Every 3 years for 25-49 years of age

	c. Every 2 years for 50 to 59 years of age
Laboratory	<ol style="list-style-type: none"> <li>1. Audiogram</li> <li>2. Visual Acuity: 20/200 correctable to 20/40 (Snellen) for deck responsibility, correctable to 20/50 for engineering responsibility</li> <li>3. PPD</li> <li>4. Gross Visual Fields: If otherwise qualified, may have lost vision in one eye if remaining good eye's vision is passing</li> <li>5. Color Perception (Pseudoisochromatic Plates or Eldridge--Green Color Perception Lantern)</li> <li>6. Discretionary Tests: <ol style="list-style-type: none"> <li>a. Chest X-Ray</li> <li>b. ECG</li> <li>c. Travel Immunizations (offered)</li> </ol> </li> </ol>
Physical Exam	<ol style="list-style-type: none"> <li>1. Medical and Occupational History</li> <li>2. Physical Examination</li> <li>3. Shipboard Food Handlers must abide by the Food Handler Protocol</li> </ol>
Written Opinion	Job Certification with limitations

<b>G. Fire Fighter</b>	
Reference	National Fire Protection Association (NFPA) 1582
Frequency	<ol style="list-style-type: none"> <li>1. Baseline Examination</li> <li>2. Annual Examination</li> </ol>
Laboratory	<ol style="list-style-type: none"> <li>1. Audiogram: Requires less than 40 dB average hearing loss at 500, 1000, 2000, and 3000 Hz in the "better ear"</li> <li>2. Blood Chemistry Profile with Lipid Panel and LFTs</li> <li>3. Complete Blood Count (CBC) with differential, RBC indices and morphology and platelet count</li> <li>4. Chest X-Ray: <ol style="list-style-type: none"> <li>a. Baseline</li> <li>b. Every 5 years</li> </ol> </li> <li>5. ECG</li> <li>6. Pulmonary Function: Ratio of FEV1/FVC must be greater than 0.75 if both FEV1 and FVC are below normal</li> <li>7. Urinalysis with Microscopic</li> <li>8. Visual Acuity: Far (Snellen) at least 20/40 binocular corrected and at least 20/100 binocular uncorrected for those routinely using corrective lenses</li> <li>9. Color perception, depth perception, and visual fields</li> <li>10. PSA (age 40 annually if family history, African American, or clinically indicated otherwise age 50 annually)</li> <li>11. Mammography (age 40)</li> <li>12. PPD</li> <li>13. Hepatitis B Vaccine and Titers</li> <li>14. Hepatitis C Screen (Baseline and Exposure)</li> <li>15. Tetanus Diphtheria Vaccine (Every 10 years)</li> <li>16. Measles, Mumps, Rubella (MMR) Vaccine</li> </ol>

	17. Polio Vaccine 18. Varicella Vaccine Offered 19. Influenza Vaccine Offered 20. Discretionary Tests: <ul style="list-style-type: none"> <li>a. Stress test (age determined): Graded Exercise Test (GXT) with diagnostic symptom limit (95% PAAMHR) "if clinically indicated by history or symptoms" offered annually after 50 years of age</li> <li>b. HIV Screen</li> </ul>
Physical Exam	1. Medical and Occupational History 2. Physical Examination with focus on any condition that may cause any sudden incapacitation or inability to perform duties, tendencies to seizures, dizziness, claustrophobia, loss of physical control, or similar undesirable conditions 3. Evaluation of ability to wear respirator may be required, see protocol Section 3 K, Certification Examination for Occupational Respirator Use
Written Opinion	Job Certification with: <ul style="list-style-type: none"> <li>a. Statement that the employee has sufficient strength, endurance, and emotional stability to perform the work</li> <li>b. An opinion the employee would not be a hazard to self or others</li> <li>c. Any limitations in job functions or ability to wear PPE</li> </ul>

<b>H. Food Handler</b>	
Reference	21 CFR 10.115; 29 CFR 1910.141(h)
Frequency	1. Baseline Examination 2. Annual Examination
Laboratory	1. PPD 2. Hepatitis A (offered) 3. Discretionary Tests: <ul style="list-style-type: none"> <li>a. Complete Blood Count (CBC)</li> <li>b. Chest X-Ray</li> </ul>
Physical Exam	1. Medical and Occupational History focusing upon transmittable infectious diseases 2. Focused Physical Examination 3. Examiner should provide counseling regarding hygiene and prevention of cross contamination/fecal-oral diseases
Written Opinion	Job Certification with statement that employee is free from communicable diseases

<b>I. Locomotive Engineer</b>	
Reference	49 CFR 240.121 and Appendix F
Frequency	1. Baseline Examination 2. Triennial Examination
Laboratory	1. Audiogram: Hearing loss in better ear $\leq$ 40 dB at 500, 1,000, 2,000 Hz with or without hearing aid 2. Visual Acuity: 20/40 with or without corrective lenses

	3. Visual Fields: at least 70 degrees in each eye 4. Color: Recognize and distinguish between the colors of railroad signals
Physical Exam	1. Medical and Occupational History 2. Focused Physical Examination with focus on assessing any condition affecting vision, hearing, that may cause any sudden incapacitation or inability to perform duties, tendencies to seizures, loss of physical control, or similar undesirable conditions
Written Opinion	Job Certification with any limitations

<b>J. Motive (Heavy) Equipment Operator</b>	
Note: includes specialized maintenance and construction equipment, such as bulldozers, dump trucks, etc. and forklifts.	
Reference	NASA-STD-8719.9 Standard for Lifting Devices and Equipment ANSI/Industrial Truck Standards Developing Foundation (ITSDF) B56.1-2009
Frequency	1. Baseline Examination 2. Biennial Examination
Laboratory	1. Audiogram: Hearing threshold in better ear $\leq$ 40 dB (500, 1000, 2000 Hz) 4. Visual Acuity: 20/40 with or without corrective lenses 5. Gross Visual Fields: 70 degrees in each eye 6. Color: Recognize and distinguish between the colors 7. Urinalysis (Dipstick) 8. Discretionary Tests: <ul style="list-style-type: none"> <li>a. Chest X-Ray</li> <li>b. Blood Chemistry Profile</li> <li>c. Complete Blood Count (CBC)</li> <li>d. Stress Test (Age Determined)</li> <li>e. ECG</li> <li>f. Pulmonary Function</li> </ul>
Physical Exam	1. Occupational and Medical History 2. Physical Examination with focus on assessing any condition affecting vision, hearing, that may cause any sudden incapacitation or inability to perform duties, tendencies to seizures, loss of physical control, or similar undesirable conditions
Written Opinion	Job Certification with any limitations

<b>K. Occupational Respirator Use</b>	
Reference	OHSA 29 CFR 1910.134, and 29 CFR 1910.134 Appendices A, B1, B2, C
Frequency	1. Baseline Examination 2. Baseline and Annual OSHA Respirator Questionnaire 3. Variable or Exposure-Determined Examination
Laboratory	1. Discretionary
Physical Exam	1. OSHA Respirator Medical Evaluation Questionnaire (Mandatory: 1910.134 Appendix A) annually



	<ol style="list-style-type: none"> <li>2. Focused Physical Examination with a focus on employee's ability to use a respirator for Baseline only</li> <li>3. Annual Focused Physical Examinations required only if positive responses to Questions 1-8 Section 2, Part A of Appendix C or at the discretion of the physician</li> <li>4. Discretionary Tests: <ol style="list-style-type: none"> <li>a. Chest X-Ray</li> <li>b. Pulmonary Function</li> </ol> </li> </ol>
Written Opinion	<p>Required Standard Written Medical Opinion including:</p> <ol style="list-style-type: none"> <li>a. Statement employee is medically able to use the respirator, or any limitations on respirator use related to a medical condition or related to workplace conditions in which respirator will be used</li> <li>b. The need for any medical follow-up</li> <li>c. A statement that employee has been given a copy of the written opinion</li> <li>d. If the respirator is a negative pressure respirator and the Physician or Other Licensed Health Care Professional (PLHCP) finds a medical condition that may place the employee's health at increased risk if the respirator is used, the employer shall provide a powered air purifying respirators (PAPR) if the medical evaluation finds that the employee can use such a respirator; if a subsequent medical evaluation finds that the employee is medically able to use a negative pressure respirator, then the employer is no longer required to provide a PAPR</li> </ol>

<b>L. Ordnance Handler</b>	
Reference	
Frequency	<ol style="list-style-type: none"> <li>1. Baseline Examination</li> <li>2. Annual Examination</li> </ol>
Laboratory	<ol style="list-style-type: none"> <li>1. Audiogram</li> <li>2. Visual Acuity</li> <li>3. Depth Perception</li> <li>4. Color Perception (as related to specific job requirements)</li> <li>5. Urinalysis (Dipstick)</li> <li>6. Discretionary Tests: <ol style="list-style-type: none"> <li>a. ECG</li> <li>b. Complete Blood Count (CBC)</li> <li>c. Blood Chemistry Profile</li> <li>d. Chest X-Ray</li> <li>e. Pulmonary Function</li> </ol> </li> </ol>
Physical Exam	<ol style="list-style-type: none"> <li>1. Medical and Occupational History to ascertain any condition that may cause any sudden incapacitation or inability to perform duties, tendencies to seizures, dizziness, claustrophobia, loss of physical control, or similar undesirable conditions</li> <li>2. Physical Examination focusing on strength, endurance, agility, coordination, adequate visual acuity and hearing, and</li> </ol>

	emotional stability
Written Opinion	Job Certification with any limitations

<b>M. Primary Animal Contact</b>	
Note: May have to be modified to cover the animal species and specific agents being used.	
Reference	National Institutes of Health (NIH), NIOSH
Frequency	<ol style="list-style-type: none"> <li>1. Baseline Examination</li> <li>2. Annual Examination</li> <li>3. Variable or Exposure-Determined Examination</li> </ol>
Laboratory	Baseline only: <ol style="list-style-type: none"> <li>1. Complete Blood Count (CBC)</li> <li>2. Blood Chemistry Profile</li> <li>3. Pulmonary Function</li> <li>4. PPD</li> <li>5. Tetanus Vaccine every 10 years</li> <li>6. Discretionary:               <ol style="list-style-type: none"> <li>a. Serum Sample (10 mL) for storage</li> <li>b. Rabies Titer</li> <li>c. Rubeola Titer</li> <li>d. Hepatitis A and B Vaccine</li> <li>e. Offer Rabies Vaccine</li> </ol> </li> </ol>
Physical Exam	<ol style="list-style-type: none"> <li>1. Medical and Occupational History (Annual Interim History)</li> <li>2. Physical Examination with focus on immunization history, conditions with suppression of the immune system, allergies to animals and prior illnesses from animal</li> <li>3. Evaluation of ability to wear respirator may be required, see protocol Section 3 K, Certification Examination for Occupational Respirator Use</li> </ol>
Written Opinion	Job Certification with any limitations

<b>N. Security</b>	
Reference	
Frequency	<ol style="list-style-type: none"> <li>1. Baseline Examination</li> <li>2. Annual Examination</li> </ol>
Laboratory	<ol style="list-style-type: none"> <li>1. Audiogram</li> <li>2. Visual Acuity, Color Vision, and Visual Fields</li> <li>3. ECG</li> <li>4. Urinalysis (Dipstick)</li> <li>5. PPD</li> <li>6. Discretionary Tests:               <ol style="list-style-type: none"> <li>a. Pulmonary Function</li> <li>b. Exercise Stress Test</li> </ol> </li> </ol>
Physical Exam	<ol style="list-style-type: none"> <li>1. Medical and Occupational History</li> <li>2. Physical Examination with focus on ability to perform the essential functions of the job and maintain emotional stability</li> </ol>

Written Opinion	<p>Required:</p> <ol style="list-style-type: none"> <li>Certification statement that the employee has emotional stability to perform the work</li> <li>In the opinion of the examiner that no medical condition was detected which would place the employee at increased risk of material impairment of the employee's health or would be a hazard to self or others</li> <li>Any limitations in job functions</li> </ol>
-----------------	---

<b>O. Self Contained Atmospheric Protective Ensemble (SCAPE)</b>	
Reference	29 CFR 1910.134
Frequency	<ol style="list-style-type: none"> <li>Baseline Examination</li> <li>Annual Examination</li> </ol>
Laboratory	<ol style="list-style-type: none"> <li>Blood Chemistry Profile</li> <li>Complete Blood Count (CBC)</li> <li>Chest X-Ray (Baseline only)</li> <li>Pulmonary Function</li> <li>Audiogram: Hearing threshold less than 40 dB average hearing loss at 500, 1000, 2000, and 3000 Hz in the "Better Ear"</li> <li>Visual Acuity: <ol style="list-style-type: none"> <li>Far (Snellen) at least 20/70 in one eye and 20/100 in the other eye corrected to 20/20 in one eye and 20/40 in the other eye</li> <li>Near vision correctable to 20/40 (Snellen equivalent) bilaterally</li> </ol> </li> <li>Color and Depth Perception</li> <li>Gross Visual Fields intact</li> <li>Discretionary Tests: <ol style="list-style-type: none"> <li>Annual Chest X-Ray</li> <li>Urinalysis with Microscopic</li> <li>ECG</li> </ol> </li> </ol>
Physical Exam	<ol style="list-style-type: none"> <li>OSHA Respirator Medical Evaluation Questionnaire (Mandatory: 29 CFR 1910.134, Appendix A)</li> <li>Physical Examination with focus on employee's ability to use a respirator under the conditions of use (i.e., temperature extremes)</li> <li>Have sufficient strength, endurance, agility, coordination, and emotional stability to avoid interference with performance</li> </ol>
Written Opinion	<p>Required:</p> <ol style="list-style-type: none"> <li>Statement that the employee is medically able to use the SCAPE, or any limitations on SCAPE use related to a medical condition or related to workplace conditions in which the SCAPE will be used</li> <li>Any need for medical follow-up</li> <li>Statement that employer/employee has been given a copy of the written opinion</li> </ol>

<b>P. Soldering</b>	
Reference	
Frequency	<ol style="list-style-type: none"> <li>Baseline Examination</li> </ol>

	2. Annual Examination 3. Variable or Exposure-Determined
Laboratory	1. Pulmonary Function (Baseline only) 2. Blood Chemistry Profile 3. Complete Blood Count (CBC) 4. Urinalysis 5. Visual Acuity, Depth Perception and Color Discrimination 6. Chest X-Ray (Baseline only)
Physical Exam	1. Medical and Occupational History 2. Physical Examination with focus on skin and respiratory tract. 3. Evaluation of ability to wear respirator may be required, see protocol Section 3 K, Certification Examination for Occupational Respirator Use 4. Evaluation of other potential exposures, e.g., lead
Target Organs	Respiratory, skin, varies with type of solder used

<b>Q. Voluntary Respirator Use</b> <b>Note: For employees requesting elastomeric respirator</b>	
Reference	OHSA 29 CFR 1910.134 Appendix A ,B1, B2, C, D
Frequency	1. Baseline Examination
Physical Exam	1. Focused Physical Evaluation 2. History to ascertain any condition that may cause any sudden incapacitation, inability to perform duties 3. Evaluation of ability to wear respirator under expected use conditions (i.e., temperature extremes) 4. OSHA Respirator Medical Evaluation Questionnaire (Mandatory: 1910.134 Appendix A)
Written Opinion	Required: Any limitations in job functions or ability to wear PPE

#### 4. Flight Activities

A. First Class Airman's Medical Certificate (Airline Transport Pilot)																			
Reference	14 CFR 67, NPR 7900.3 Aircraft Operations Management w/Interim Revision to Chapter 3, Appendix A Aviation Medical Program Certification For NASA Pilots																		
Frequency	1. Baseline Examination (high performance aircraft requires a NASA medical evaluation in addition to the FAA certificate, see NPR 7900.3, Appendix) 2. Every 6 months																		
Laboratory	1. Audiogram (see standard for other acceptable means of testing hearing) with results no worse than: <table><tr><td></td><td>500 Hz</td><td>1000 Hz</td><td>2000 Hz</td><td>3000 Hz</td></tr><tr><td>Better ear (dB)</td><td>35</td><td>30</td><td>30</td><td>40</td></tr><tr><td>Poorer ear (dB)</td><td>35</td><td>50</td><td>50</td><td>60</td></tr></table>					500 Hz	1000 Hz	2000 Hz	3000 Hz	Better ear (dB)	35	30	30	40	Poorer ear (dB)	35	50	50	60
	500 Hz	1000 Hz	2000 Hz	3000 Hz															
Better ear (dB)	35	30	30	40															
Poorer ear (dB)	35	50	50	60															
	2. Visual Acuity: <ul style="list-style-type: none"><li>a. Distant: 20/20 in each eye with or without correction</li><li>b. Near: 20/40, Snellen equivalent at 16 inches, or better in each eye with or without correction</li></ul>																		

	<ul style="list-style-type: none"> <li>c. Near at age 50 or older: 20/40, Snellen equivalent at 16 and 32 inches, or better in each eye with or without correction</li> <li>d. Intermediate: 20/40 or better in each eye with or without correction at age 50 and over</li> </ul> <ol style="list-style-type: none"> <li>2. Field of Vision and Peripheral Vision Test</li> <li>3. Color Perception</li> <li>4. ECG (transmitted to FAA): First examination after 35 years of age and annually after 40 years of age</li> <li>5. Urinalysis (Dipstick)</li> <li>6. Discretionary Tests: <ul style="list-style-type: none"> <li>a. Blood Chemistry Profile (can include Fasting Blood Sugar and Blood Lipid Profile).</li> <li>b. Complete Blood Count (CBC)</li> <li>c. Chest X-Ray</li> <li>d. Pulmonary Function</li> <li>e. Exercise Stress Test</li> </ul> </li> </ol>
Physical Exam	<ol style="list-style-type: none"> <li>1. FAA Medical History Form 8500-8</li> <li>2. Physical Examination by FAA certified physician with focus on any condition that may cause any sudden incapacitation or inability to perform duties, tendencies to seizures, dizziness, claustrophobia, loss of physical control, or similar undesirable conditions</li> <li>3. Average BP should not exceed 155mm/95mm</li> <li>4. Check references above for acceptable standards, equipment, and requirements</li> </ol>
Written Opinion	<ol style="list-style-type: none"> <li>a. Certification with any limitations, or referral to Aerospace Medical Certification Division, or Regional Flight Surgeon for possible further specialized clinical evaluation or testing.</li> <li>b. For waivers refer to NPR 7900.3 Appendix A</li> <li>c. Examinations conducted by non-NASA Aircrew Medical Examiners (AME) will require a records review by a NASA Occupational Health Clinic physician prior to recommendation to the Center Director.</li> <li>d. See 14 CFR 67 for Pilot Medical Standards</li> </ol>

<b>B. Second Class Airman's Medical Certificate (Commercial Pilot; Flight Engineer; Flight Navigator; Air Traffic Control Tower Operator)</b>	
Reference	14 CFR 67 Appendix A, NPR 7900.3
Frequency	<ol style="list-style-type: none"> <li>1. Baseline Examination</li> <li>2. Annual Examination</li> </ol>
Laboratory	<ol style="list-style-type: none"> <li>1. Audiogram see FAA I</li> <li>2. Visual Testing and Requirements (see FAA I)</li> <li>3. ECG (transmitted to FAA): First examination after 35 years of age, and annually after 40 years of age</li> <li>4. Urinalysis (Dipstick)</li> <li>5. Discretionary Tests: <ul style="list-style-type: none"> <li>a. Blood Chemistry Profile (can include Fasting Blood Sugar and Blood Lipid Profile).</li> <li>b. Complete Blood Count (CBC)</li> </ul> </li> </ol>

	<ul style="list-style-type: none"> <li>c. Chest X-Ray</li> <li>d. Pulmonary Function</li> <li>e. Exercise Stress Test</li> </ul>
Physical Exam	<ul style="list-style-type: none"> <li>1. Medical and Occupational History</li> <li>2. Physical Examination by FAA certified physician with focus on any condition that may cause any sudden incapacitation or inability to perform duties, tendencies to seizures, dizziness, claustrophobia, loss of physical control, or similar undesirable conditions</li> <li>3. Average BP should not exceed 155mm/95mm</li> <li>4. Check references above for acceptable standards, equipment, and requirements</li> </ul>
Written Opinion	<ul style="list-style-type: none"> <li>a. Certification with any limitations, or referral to Aerospace Medical Certification Division, or Regional Flight Surgeon for possible further specialized clinical evaluation or testing</li> <li>b. See 14 CFR 67 for Pilot Medical Standards</li> </ul>

<b>C. Third Class Airman's Medical Certificate (Private Pilot, Recreational Pilot, Student Pilot)</b>	
Reference	14 CFR 67 Appendix A, NPR 7900.3
Frequency	<ul style="list-style-type: none"> <li>1. Baseline Examination</li> <li>2. Every 2 years, if 40 years of age or older</li> <li>3. Every 3 years, if under 40 years of age</li> </ul>
Laboratory	<ul style="list-style-type: none"> <li>1. Audiogram (see FAA I)</li> <li>2. Visual Acuity: <ul style="list-style-type: none"> <li>a. Distant: 20/40 or better in each eye with or without correction</li> <li>b. Near: 20/40, Snellen equivalent, or better in each eye at 16 inches with or without corrective lens</li> <li>c. Intermediate: No requirement</li> </ul> </li> <li>3. Visual Fields and Color (see FAA I)</li> <li>4. Urinalysis (Dipstick)</li> <li>5. Discretionary Tests: <ul style="list-style-type: none"> <li>a. Blood Chemistry Profile (can include Fasting Blood Sugar and Blood Lipid Profile)</li> <li>b. Complete Blood Count (CBC)</li> <li>c. Chest X-Ray</li> <li>d. Pulmonary Function</li> <li>e. ECG</li> <li>g. Exercise Stress Test</li> </ul> </li> </ul>
Physical Exam	<ul style="list-style-type: none"> <li>1. Medical and Occupational History</li> <li>2. Physical Examination by FAA certified physician with focus on any condition that may cause any sudden incapacitation or inability to perform duties, tendencies to seizures, dizziness, claustrophobia, loss of physical control, or similar undesirable conditions</li> <li>3. Average BP should not exceed 155mm/95mm</li> <li>4. Check references above for acceptable standards, equipment, and requirements</li> </ul>

Written Opinion	<ol style="list-style-type: none"> <li>1. Certification with any limitations, or referral to Aerospace Medical Certification Division, or Regional Flight Surgeon for possible further specialized clinical evaluation or testing</li> <li>2. See 14 CFR 67 for Pilot Medical Standards</li> </ol>
-----------------	--

<b>D. Air Traffic Control Specialist or Flight Crew (Not requiring FAA Certification)</b>	
Reference	Office of Personnel Management (OPM) Air Traffic Control Series 2152, NPR 7900.3
Frequency	<ol style="list-style-type: none"> <li>1. Baseline Examination</li> <li>2. Annual Examination</li> </ol>
Laboratory	<ol style="list-style-type: none"> <li>1. Audiogram or demonstrate ability to hear normal conversation in a quiet room, using both ears, at a distance of 6 feet with the examiner's back turned</li> <li>2. Visual Acuity: <ol style="list-style-type: none"> <li>a. Distant 20/20 in at least one eye with or without correction</li> <li>b. Near vision 20/20, Snellen equivalent, with or without correction</li> </ol> </li> <li>3. Visual Fields: Normal</li> <li>4. Color Vision</li> <li>5. Tonometry</li> <li>6. ECG</li> <li>7. Exercise Stress Test</li> <li>8. Urinalysis (Dipstick)</li> <li>9. Discretionary Tests: <ol style="list-style-type: none"> <li>a. Blood Chemistry (can include Fasting Blood Sugar and Blood Lipid Profile)</li> <li>b. Complete Blood Count (CBC)</li> <li>c. Chest X-Ray</li> <li>d. Pulmonary Function</li> </ol> </li> </ol>
Physical Exam	<ol style="list-style-type: none"> <li>1. Medical and Occupational History</li> <li>2. Physical Examination (see OPM qualifications on age based blood pressure values) with focus on cardiovascular, neurological, musculoskeletal, general medical, psychiatric and substance dependency</li> </ol>
Written Opinion	Certification with any limitations

<b>E. Qualified Non-Crew Member</b>	
Reference	NPR 7900.3
Frequency	<ol style="list-style-type: none"> <li>1. Baseline Examination</li> <li>2. Biennial Examination</li> </ol>
Laboratory	<ol style="list-style-type: none"> <li>1. Audiogram</li> <li>2. Visual Acuity</li> <li>3. Gross Visual Fields</li> <li>4. Urinalysis (Dipstick)</li> <li>5. Discretionary Tests: <ol style="list-style-type: none"> <li>a. Color Perception</li> <li>b. Blood Chemistry Profile (can include Fasting Blood Sugar and Blood Lipid Profile)</li> </ol> </li> </ol>

	<ul style="list-style-type: none"> <li>c. Complete Blood Count (CBC)</li> <li>d. Chest X-Ray</li> <li>e. ECG</li> <li>f. Pulmonary Function</li> <li>g. Exercise Stress Test</li> </ul>
Physical Exam	<ul style="list-style-type: none"> <li>1. Medical and Occupational History</li> <li>2. Physical Examination with focus on assessing any condition that may cause any sudden incapacitation or inability to perform duties, tendencies to seizures, dizziness, claustrophobia, loss of physical control, or similar undesirable conditions and emotional stability to avoid interference with performance, or in the opinion of the examiner could render a hazard to self or others</li> </ul>
Written Opinion	Certification: Opinion that the employee has no physical limitation or medical condition which would prevent employee from performing their ordinary duties or be a hazard to self or others

## 5. Special Purpose Administrative Examinations

<b>A. Fitness For Duty (FFD)</b>	
Defined	Fitness for Duty (FFD) examinations are performed at the request of management when a change in work performance, productivity, or health is observed or suspected. NPR 1800.1C, Chapter 2.9
Frequency	Variable upon an unexpected change in behavior or performance. The examination should be completed as soon as possible after a written request through management has been made.
Scope	The physician should evaluate whether there is a medical or psychological condition impacting work performance. A job description with the physical requirements and essential job functions is an integral part of this evaluation. Cooperation and coordination with the treating physician(s), as well as other services such as the Employee Assistance Program (EAP) can be of help to an affected employee.
Managers Responsibilities	The supervisor/manager requesting the FFD examination should notify the employee and have their consent, provide documentation to the physician and a copy of the employee's job description. Managers must also decide if there is a "For Cause" need for drug testing based upon performance. Since this testing is not a medical test, the manager must contact their Human Resources coordinator to arrange testing.
Laboratory	Discretionary
Confidentiality	Confidentiality is of utmost importance and all recommendations and reports must be limited to work-related matters, e.g., work limitation, modifications or accommodations. No non-work related medical diagnosis should be released in the written opinion.
Written Opinion	Required return to duty status for the employee's manager including recommendations for work limitations or accommodations.

<b>B. Return to Work (RTW)</b>	
Defined	RTW evaluations are usually performed when employees return to



	work after an illness or injury of greater than 3 business days. NPR 1800.1C Chapter 2.9
Frequency	Variable or Exposure-Determined Examination
Scope	<ol style="list-style-type: none"> <li>1. Vital signs</li> <li>2. The evaluation should focus on the employee's ability to perform the essential job functions with or without work limitations, modifications or accommodations. The information from the employee's physician is reviewed, and a decision is made whether a focused physical and/or tests are necessary.</li> </ol>
Managers Responsibilities	The manager requesting the RTW examination must provide a copy of the employee's job description that includes the functional and physical requirements.
Laboratory	Focused laboratory based upon the prior condition/problem of the employee.
Confidentiality	Confidentiality is of utmost importance and all recommendations and reports must be limited to work-related matters, e.g., work limitation, modifications or accommodations.
Written Opinion	<p>A RTW certificate for the employee's manager should indicate:</p> <ol style="list-style-type: none"> <li>a. A statement of work limitations (including modifications and duration)</li> <li>b. A statement of any Personal Protective Equipment (PPE) needed or limitations in use of PPE</li> <li>c. For an occupational related issue, safety and health should receive a copy of the RTW statement</li> </ol>

<b>C. International Traveler</b>	
Reference	NPR 1800.C, Chapter 2.16 International Travel or Assignment
Frequency	<ol style="list-style-type: none"> <li>1. Variable or Exposure-Determined Examination</li> <li>2. Note: Medical clearance required for NASA civil service employees traveling outside the United States or its possessions, with special emphasis for those traveling to Russia or the former nations under the Soviet Union, TAL site, or any developing or medically under-served country</li> </ol>
Laboratory	Immunizations offered based on recommended WHO and CDC country requirements
Physical Evaluation	<ol style="list-style-type: none"> <li>1. Medical Record Review</li> <li>2. Medical and Occupational History</li> <li>3. Physical Examination (discretionary)</li> <li>4. Offer HRA</li> <li>5. Provide education based on health risk assessment with emphasis on food and water precautions and other specific issues related to travel destination</li> </ol>
Written Opinion	Clearance: International Travel Worksheet NASA Form 1711

## **F. Voluntary Health Maintenance**

<b>A. Complete Health Maintenance Examination</b>	
Reference	Federal Employee Health Benefit Program (FEHBP), U.S. Preventative Services Task Force (USPSTF), NPR 1800.1C Chapter 2.9

Frequency	<ol style="list-style-type: none"> <li>1. Offer every 3 years to civil service personnel</li> <li>2. Offer at retirement to civil service personnel</li> </ol>
Laboratory	<ol style="list-style-type: none"> <li>1. Vital signs (weight, blood pressure, pulse rate, rhythm)</li> <li>2. Offer Total Body Skin Examination</li> <li>3. Skin Fold or BMI</li> <li>4. Baseline and when medically indicated: <ol style="list-style-type: none"> <li>a. Visual Acuity</li> <li>b. Audiogram</li> <li>c. Pulmonary Function</li> <li>d. Exercise Stress Test</li> </ol> </li> <li>5. ECG</li> <li>6. Mammograms every 1-2 years age 40 to 49 annually for age 50 to 70</li> <li>7. Colonoscopy every 10 years after age 50, earlier with family history (refer to private MD)</li> <li>8. Tonometry (if available)</li> <li>9. Menopause Counseling for females age 45 and older</li> <li>10. Breast Self-examination Education</li> <li>11. Breast Examination</li> <li>12. PAP Smear annually (every 3 years if negative consecutively x 3)</li> <li>13. PSA Test for men age 50 and older</li> <li>14. Digital Rectal and Testicular examination offered to men age 40 and older</li> <li>15. Complete Blood Chemistry (CBC)</li> <li>16. Blood Chemistry Profile</li> <li>17. Lipid Panel</li> <li>18. Urinalysis</li> <li>19. Hemocult</li> </ol>
Physical Exam	<ol style="list-style-type: none"> <li>1. Medical and Family History, if history of smoking—offer smoking cessation</li> <li>2. Complete Physical Examination</li> <li>3. Offer Health Risk Assessment (HRA)</li> </ol>
Target Organs	Multiple Organs
Written Opinion	A summary of examination and laboratory results sent to the employee

<b>B. Annual Health Maintenance Examination</b>	
Reference	FEHBP, USPSTF, NPR 1800.1C Chapter 2.9
Frequency	Offer annually to civil service personnel
Laboratory	<ol style="list-style-type: none"> <li>1. Vital signs (weight, blood pressure, pulse rate, rhythm)</li> <li>2. Mammograms every 1-2 years age 40 to 49 annually for age 50 to 70</li> <li>3. PAP Smear annually (every 3 years if negative consecutively x 3)</li> <li>4. PSA men age 50 and older</li> <li>5. Digital Rectal and Testicular Examination offered to men age 40 and older</li> <li>6. Complete Blood Count (CBC)</li> <li>7. Blood Chemistry Profile</li> <li>8. Urinalysis</li> </ol>

	9. Hemocult
Physical Exam	<ol style="list-style-type: none"> <li>1. Medical and Family History, if history of smoking—offer smoking cessation</li> <li>2. Focused Physical Examination</li> <li>3. Offer Health Risk Assessment (HRA)</li> </ol>
Target Organs	Multiple Organs
Written Opinion	A summary of examination and laboratory results sent to the employee.

<b>C. Fitness Center Clearance</b>	
Reference	American College of Sports Medicine (ACSM), NPR 1800.1C Chapter 3.3, American Heart Association (AHA)
Frequency	Every 3 years
Laboratory	Discretionary
Physical Exam	<ol style="list-style-type: none"> <li>1. Review of Physical Activity Readiness Questionnaire (PARQ)</li> <li>2. Vital signs (blood pressure, pulse)</li> <li>3. Refer to NASA Occupational Medicine Clinic for clearance if PARQ responses are positive or vital signs are abnormal</li> <li>4. Physical examination and appropriate testing required if referred by Occupational Medicine Clinic or employees healthcare provider. Documentation must be received from personal healthcare provider and reviewed by Medical Director. Medical Director responsible for final decision on fitness center clearance.</li> </ol>
Written Opinion (Clearance)	Medical clearance may specify any limitations in clearance duration (i.e., 1-Year) or Fitness Center Activity